WE CLAIM:

1.   A computer simulation method for modeling the response of one or more agents to real-world input data, comprising:

5   (a)   modeling an agent's behavioral expression in terms of a series of "scales" for behavioral expression within a given cultural environment in response to real-world input data, wherein the scales of behavioral expression progress in logical definition from more primitive behavioral states to more complex behavioral states within the given cultural environment, and wherein the agent's behavioral expression includes at least one expected agent behavioral response on one scale that is

10   linked as an expected agent behavioral response on one other scale, whereby at least one example of a progression in agent behavioral responses across the scales can be monitored in the agent's behavioral expression;

(b)   running a computer simulation in which one or more agents having respectively modeled behavioral expressions are selected to interact with selected sources of real-world input data;

15   (c)   monitoring the interaction of the expected agent behavioral responses of the agent(s) in the computer simulation with the selected sources of real-world input data; and

(d)   displaying a simulation output in a visual form depicting the interaction of the expected agent behavioral responses of the agent(s) in the computer simulation with the selected sources of real-world input data.

20

2.   A computer simulation method according to Claim 1, wherein the "scales" for behavioral expression include one or more behavioral types of the group consisting of: cultural characteristics; social characteristics; behavioral characteristics; emotional states; social interaction types; human desires; human beliefs; human empathy types; individual personality types; perception modes;

25   and decision-making processes.

3.   A computer simulation method according to Claim 1, wherein the "scales" for behavioral expression include one or more behavioral types of the group consisting of:

Scale of agent's consciousness or awareness of information that may be of

interest;

Scale of agent's navigation patterns, including the impulse to move in a particular direction, emotional patterns of the agent, or modes of categorizing and assigning labels to information items;

5   Scale of agent's actions and reactions (including emotions) or intuition on a sense level to information;

Scale of "information mulling" modes by which the agent retains a reservoir of information minutia and creates associations between information items;

Scale of agent's employment of personal information filters and contextual

10   memory for extracting meaning based on the agent's experience, and the roles they play;

Scale of agent's employment of culturally-based filters, environmental assumptions and conditions, and/or social influences to extract meaning from information items;

Scale of agent's learned modes of extracting meaning from externally presented

15   information through media channels, news of events, images and portraits, current priorities, and other external phenomena, that may cause them to put medium or long term processes into effect or influence a particular response as typical;

Scale of agent's learned or enduring knowledge of the environment he/she is involved in, its history, and its trends into the future;

20   Scale of agent's complex of deeply held beliefs (including religion) and cultural or archetypal values; and

Scale of agent's world view or overriding ethos through which all things, from the cosmos down to abstract minutia, are perceived.

25   4.   A computer simulation method according to Claim 1, wherein the real-world data input includes one or more sources from the group consisting of: news sources; broadcast media; communications and interactions between participants; publicly available information;

information sources available to selected agents; information sources available to selected organizations; analyst reports; reviews; search data; general literature; movies; images; sound; and other human perceptual data.

5   5.   A computer simulation method according to Claim 1, wherein the agent(s) selected to be run in the computer simulation include one or more agent types from the group consisting of: members of an organization; positions within an organization; a leader or "node" within an organization; a follower within an organization; a competitor to an organization; an enduring influence in the given cultural environment; domain knowledge in the given cultural environment;

10   terrain knowledge in the given cultural environment; and a society, organization or institution.

           6.   A computer simulation method according to Claim 1, wherein the agent's behavioral expression is defined in terms of expected agent behavioral responses to input data entries representing data occurrences likely to be encountered in a real-world data source, and the real-world

15   data input is a source of input data entries containing such data occurrences.

           7.   A computer simulation method according to Claim 1, wherein within each scale a plurality of refined "levels" of agent behavioral responses within that scale are defined.

20   8.   A computer simulation method according to Claim 7, wherein within each level a plurality of refined "degrees" of agent behavioral responses within that level are defined.

           9.   A computer simulation method according to Claim 1, wherein the agent's behavioral expression is defined in terms of keywords that the agent responds to in real-world text data,

25   and the computer simulation proceeds by filtering the input real-world text data for keywords matching those of a word list associated with the modeling of the agent(s) selected for the simulation, and the matched keywords are processed through the agent's behavioral expression by linking keyword matches found at each scale to other keyword matches found at each other linked scale until the linking of input-response matches reaches a terminating stage.

10.   A computer simulation method according to Claim 9, wherein the processing of keyword matches through the agent's behavioral expression is monitored and displayed in a visual form in a waveform chart displaying the frequency of keyword matches of the input text in terms of

5   scale/level/degree.

11.   A computer simulation method according to Claim 9, wherein the processing of keyword matches through the agent's behavioral expression is monitored and displayed in a visual form in a star chart displaying patterns of scale progression for an agent expression in response to an

10   input text.

12.   A computer simulation method according to Claim 9, wherein the processing of keyword matches through the agent's behavioral expression is monitored and displayed in a visual form in a grid chart displaying the patterns of scale progression for an agent expression in response to

15   an input text.

13.   A computer simulation method according to Claim 9, wherein the processing of keyword matches through the agent's behavioral expression is monitored and displayed in a visual form in a pole chart displaying markers for keyword "hits" of an agent expression in response to an

20   input text in terms of scales as poles, level as vertical position on the poles, and degree as horizontal position of a marker at a given level on a given pole.

14.   A method for programming a computer simulation of the response of one or more agents to real-world input data, comprising:

25   (a)   modeling an agent's behavioral expression in terms of a series of "scales" for behavioral expression within a given cultural environment in response to real-world input data, wherein the scales of behavioral expression progress in logical definition from more primitive behavioral states to more complex behavioral states within the given cultural environment, and wherein the agent's

- 36 -

behavioral expression includes at least one expected agent behavioral response on one scale that is linked as an expected agent behavioral response on one other scale, whereby at least one example of a progression in agent behavioral responses across the scales can be monitored in the agent's behavioral expression;

5   (b)   selecting one or more agents having respectively modeled behavioral expressions are selected to interact with selected sources of real-world input data; and

        (c)   programming the operation of the computer simulation to proceed by filtering the real-world input data for matches to a behavioral response list associated with the modeling of the agent(s) selected for the simulation, and processing the matched behavioral responses through the

10 agent's behavioral expression by linking behavioral response matches found at one scale to other behavioral response matches found at each other scale until the linking of input-response behavioral response matches reaches a terminating stage.

        15.   A method for programming a computer simulation according to Claim 14,

15 further comprising programming a display of simulation output in a visual form depicting the interaction of the expected agent behavioral responses of the agent(s) in the computer simulation with the selected sources of real-world input data.

        16.   A method for programming a computer simulation according to Claim 14,

20 wherein the "scales" for behavioral expression include one or more behavioral types of the group consisting of: cultural characteristics; social characteristics; behavioral characteristics; emotional states; social interaction types; human desires; human beliefs; human empathy types; individual personality types; perception modes; and decision-making processes.

25   17.   A method for programming a computer simulation according to Claim 14, wherein the real-world data input includes one or more sources from the group consisting of: news sources; broadcast media; communications and interactions between participants; publicly available information; information sources available to selected agents; information sources available to selected organizations; analyst reports; reviews; search data; general literature;

movies; images; sound; and other human perceptual data.

18. A method for programming a computer simulation according to Claim 14, wherein the agent(s) selected to be run in the computer simulation include one or more agent types from the group consisting of: members of an organization; positions within an organization; a leader or "node" within an organization; a follower within an organization; a competitor to an organization; an enduring influence in the given cultural environment; domain knowledge in the given cultural environment; terrain knowledge in the given cultural environment; and a society, organization or institution.

19. A visual analysis tool for a computer simulation of the response of one or more agents to real-world input data, comprising a display of simulation output in a visual form depicting the interaction of the expected agent behavioral responses of the agent(s) in the computer simulation with the selected sources of real-world input data,

wherein an agent's behavioral expression is modeled in terms of a series of "scales" for behavioral expression within a given cultural environment in response to real-world input data, wherein the scales of behavioral expression progress in logical definition from more primitive behavioral states to more complex behavioral states within the given cultural environment, and wherein the agent's behavioral expression includes at least one expected agent behavioral response on one scale that is linked as an expected agent behavioral response on one other scale, whereby at least one example of a progression in agent behavioral responses across the scales can be monitored in the agent's behavioral expression;

wherein one or more agents having respectively modeled behavioral expressions are selected to interact with selected sources of real-world input data; and

wherein the operation of the computer simulation proceeds by filtering the real-world input data for matches to a behavioral response list associated with the modeling of the agent(s) selected for the simulation, and processing the matched behavioral responses through the agent's behavioral expression by linking behavioral response matches found at one scale to other behavioral response matches found at each other scale until the linking of input-response behavioral response

matches reaches a terminating stage.

20.   A visual analysis tool for a computer simulation according to Claim 19, wherein the visual display is one or more display types from the group consisting of:

5   (i)   a waveform chart displaying the frequency of keyword matches of the input text in terms of scale/level/degree;

(ii)   a star chart displaying patterns of scale progression for an agent expression in response to an input text;

(iii)   a grid chart displaying the patterns of scale progression for an agent
10   expression in response to an input text;

(iv)   a pole chart displaying markers for keyword "hits" of an agent expression in response to an input text in terms of scales as poles, level as vertical position on the poles, and degree as horizontal position of a marker at a given level on a given pole; and

(v)   a waveform chart displaying the frequency of keyword matches of the
15   real-world input data in terms of time.